

Translation

PATENT COOPERATION TREATY

PCT/CH2003/000247



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 1936/PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/CH2003/000247	International filing date (day/month/year) 14 April 2003 (14.04.2003)	Priority date (day/month/year)
International Patent Classification (IPC) or national classification and IPC A61F 2/44		
Applicant MATHYS MEDIZINALTECHNIK AG		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 5 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 30 August 2004 (30.08.2004)	Date of completion of this report 26 July 2005 (26.07.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/CH2003/000247

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
pages _____ 1-11 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the claims:
pages _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____ 1-33 _____, filed with the letter of _____ 13 May 2005 (13.05.2005)
- ☒ the drawings:
pages _____ 1/4-4/4 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/CH 03/00247

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-33	YES
	Claims		NO
Inventive step (IS)	Claims	1-33	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-33	YES
	Claims		NO

2. Citations and explanations

Reference is made to the following document:

D1: EP-A-0 346 129 (UNIV NEW JERSEY MED; UNIV RUTGERS (US);
JOHNSON & JOHNSON ORTHOPAE) 13 December 1989
(1989-12-13).

Claim 1

(positive opinion)

Document D1 is considered to be the closest prior art for the subject matter of claim 1.

D1 discloses (the references in parentheses are to D1):

an intervertebral implant provided with a central axis, comprising

- a) a lower and an upper cover plate (8, 10), and
- b) a central part (2) which is located between the cover plates and is provided with a sleeve (4) that surrounds a fibre system;
- c) the fibre system is connected to the cover plates (column 10, line 60 to column 11, line 16), and
- d) the fibre system is wound around the central part along the cylindrical outer surface (column 4, lines 51 to 53), and
- e) the sleeve surrounds the periphery of the central part (2) (figures 1 to 3) and is made of a homogeneous elastomer

(column 4, lines 53 to 55)) which is criss-crossed by the fibre system.

The subject matter of the claim differs therefore from the prior art in that

d) the fibre system is guided over the outer surfaces of the two cover plates and at least partially surrounds the central part and the two cover plates; and

e) the sleeve surrounds the central part (2) peripherally (figures 1 to 3) and is made of a homogeneous elastomer (column 4, lines 53 to 55)) which is criss-crossed by the fibre system.

The subject matter of claim 1 is therefore novel (PCT Article 33(2)).

The problem addressed by the present invention can therefore be considered that of improving the torsional rigidity and the fixation of the intervertebral implant.

This is achieved in the present invention in that the fibre system is better able to absorb a tensile load and at the same time forms a structure on the outer surface of the cover plates.

The solution to this problem as proposed in claim 1 of the present application involves an inventive step (PCT Article 33(3)), because the corresponding features are neither disclosed nor suggested in the available prior art.

Claims 2-33

Claims 2-33 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.

Box VII**Certain defects in the international application**

The statement $d < \delta$ on page 11 appears to be inconsistent with the representation of the thicknesses in figure 7.